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FPR-4-005
Issue No. 27
30 April 1962

PROJECT QUICK CHECK MONTHLY PROGRESS REPORT

(TITLE UNCLASSIFIED)

COPY NO. ___

GENERAL DYNAMICS | FORT WORTH

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FPR-4-005
Issue No. 27
30 April 1962

PROJECT QUICK CHECK, ~~MONTHLY PROGRESS REPORT~~

(Title Unclassified)

Submitted Under
Contract AF33(600)-40367

This report covers the period of 1 April through 30 April 1962

APPROVED BY: _____
L. C. Sonntag

_____
M. A. Clanton

GENERAL DYNAMICS/FORT WORTH
A Division of General Dynamics Corporation
Fort Worth, Texas

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F O R E W O R D

Project Quick Check is an All Weather Reconnaissance and Charting System which will provide timely intelligence and targeting information for missile and manned, high-speed systems under all weather conditions.

This report is the twenty-seventh issue in a series of monthly progress reports on the progress made by General Dynamics/Fort Worth on Project Quick Check. Contract AF33(600)-40367. The work accomplished during the month of April 1962 is described in the following pages.

TABLE OF CONTENTS

S U M M A R Y

The Quick Check Program was officially redirected, in part, at a meeting held at General Dynamics/Fort Worth (GD/FW) on 3 April 1962 in which the following agreements were reached.

GD/FW Will:

1. Accomplish three successful, specially directed flights on a "quick turnaround" basis on or before 26 April 1962.

2. Modify the APS-73 System to provide all channels on one side, with two channels adjusted for increased magnification.

3. Exert best efforts to ensure that all Quick Check systems are functioning satisfactorily prior to flight; however, primary emphasis will be placed on APS-73 performance, and decisions relative to "fly" or "abort" will be based on the APS-73.

4. Conduct operations on a seven-day, two-shift operation basis, as required, to accomplish the three successful specially directed flights.

5. Upon completion of the three flights above, or after 26 April 1962, whichever occurs first, the flight test program shall revert back to flying normal Quick Check flight lines with systems having the priorities as established for normal Quick Check operations. In this connection, it is recognized that the APS-73 will remain in the modified configuration and it will thus be impossible to obtain normal APS-73 coverage.

6. Exert every effort to complete the flight test program within contract schedule and present funding.

ASD Will:

1. Authorize 3,128-overtime hours as the estimated overtime required to accomplish this task. Premium cost will be recognized as allowable cost under Contract AF33(600)-40367.

2. Amend the Contract to provide that Quick Check Flight No. 79 and four successful specially directed flights shall be recognized as contract compliance for, and in lieu of, a like number of Quick Check mapping mission flights.

3. Obtain clearances as may be required to open the runway at Carswell Air Force Base, as necessary, to accomplish the three "quick turnaround" flights.

Special agreements were also reached on furnishing additional data for these special flights.

Flight No. 82 (Omaha - Colorado Springs areas) and Flight No. 83 (Ft. Huachuca - Nevada Test Range area), both special directed flights, were successfully flown by 12 April. The next flight had been scheduled for 15 April, thus the two remaining special flights would have been accomplished ahead of the planned schedule had not the entire B-58 fleet been grounded on 13 April. T.O. 1B-58-919 which officially grounded the aircraft indicates a target date of 5 May for a TCTO that will lift the grounding order.

This grounding was most inopportune for Quick Check since a high-system and aircraft utility was being achieved at that point in time.

A request was received to make the next flight route over the Willcox Radar Resolution range in Arizona and over selected areas in Nevada. In this connection, a trip to the Willcox range was made on 11 April by three GD/FW representatives. The purpose of the trip was to coordinate with range authorities the configuration of the radar reflectors and to make arrangements concerning flight conditions for the test and range scheduling.

The airplane was released for flight and was flown for 5 hours and 20 minutes on 12 April. Quick Check mapping data were recorded on a route from Fort Worth to El Paso to Fort Huachuca, Arizona, to Coaldale, Nevada, to Caliente, Nevada, to Blythe, California, to Fort Huachuca to El Paso to Fort Worth. This route provided two runs over the Willcox Resolution range.

The N3A Navigation System operated satisfactorily for the first two hours of flight and then lost startracking. The system was operated in the DI mode for the remainder of the flight. Stabilization and position accuracy seemed satisfactory. Post-flight checks revealed that moisture had collected on the optical tracking window. This problem was traced to a saturated desiccator which has been replaced.

Operation of the APS-73 radar was satisfactory except for intermittent operation of recorder channels 3 and 4. When the recorders stopped, they could be restarted by cycling the recorder power switch.

The APQ-77 radar was usable throughout the flight, although target resolution was degraded by an excessively high video level.

The Fixtaking Tie-In Equipment operated satisfactorily for 92 percent of Quick Check Flight No. 19. After two hours of normal performance, the computer malfunctioned and remained in a sub-computing program loop for approximately 25 minutes before returning to proper operation. This malfunction was attributed to an open wire producing an intermittent signal in the constant storage magnetic drum circuitry. A successful present-position correction was performed shortly before returning to Carswell AFB.

All other Quick Check systems appeared to operate properly.

On 13 April orders were received which effectively grounded all B-58 aircraft. Technical Order 1B-58-919 was issued on 24 April officially grounding B-58 aircraft pending a flight controls investigation. Consequently, no Quick Check flights were made during the latter half of the month.

MAJOR SYSTEMS

AUXILIARY DATA RECORDING (ADR) SYSTEM

The ADR System continued to operate without failure through all flights in April.

Flight No. 17

The ADR System recorded 24 data blocks during this short flight. There were no problems within the ADR System. It can be noted from the printout that the drift angle encodor (in Data Conversion Equipment) was not operating. That was known before the flight, but it was not desirable to delay the flight to repair the unit.

Flight No. 18

On Flight No. 18, 306 data blocks were recorded without error. Drift angle was still out, as there were only three days between these flights. The ABLE system counted 7 extra counts in 4100.

Flight No. 19

The drift angle encoder was replaced before Flight No. 19. The system recorded 371 data blocks. The ABLE time count showed 7 extra counts in 4200. An explanation is being sought, but it is considered a very minor problem.

ELECTRONIC RECONNAISSANCE SYSTEM

System ABLE operated on all flights in April without failure. Before the first flight of the month, the IF bandpass characteristics of both the X-band and the S-band receivers were readjusted to provide a smoother curve in an effort to reduce the number of intercepts showing mismatched pulse repetition intervals. Spot checks of the flight data were made after every flight, but detailed data reduction has not been possible.

Flight No. 17

System ABLE was operated for only 20 minutes in the local area.

Flight No. 18

Considerable activity was observed in the vicinities of such places as Schilling AFB (Kansas), Colorado Springs, Cheyenne, Offutt AFB, and Lincoln AFB. Between active areas there were observed several stretches, minutes long, of no activity. The data was spot-checked and matched the characteristics of known emitters believed to be located at certain places.

Flight No. 19

Large quantities of data were obtained near Fort Huachuca, Arizona. A sample of the ABLE data from this flight is shown in Figure 1, which is a photograph of an oscillogram of one data block recorded on the ABLE Tape Recorder. It is in binary-digital code, representing the following measurements of parameters of the received signal: PRF 910-1000 pps, PW 0-3 usec, Frequency 9290 mc. The data block also includes a time correlation which places the intercept at a time when the airplane was 10-20 miles north of Fort Huachuca, flying west, and gives a roll attitude reading of 1^{o} to 2^{o} left-wing down.

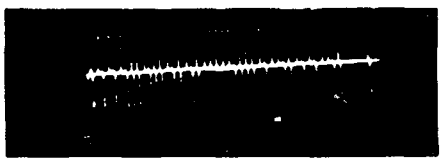


Figure 1. ABLE Electronic Reconnaissance System; Fort Huachuca, Arizona; Flight No. 19; Altitude 31,630 feet; Heading 270 degrees; Ground Speed 553 knots

These measurements compare closely with the characteristics of the M-33 radar set, several of which are believed to be in operation at Fort Huachuca. They might also cover the AN/CPS-9 radar set. Several similar intercepts were recorded at approximately the same time. Some of the other data matched the characteristics of known radar types which are believed to be in operation at various places along the flight line.

The flight tape from an average Quick Check flight includes thousands of data blocks such as the one shown here. In the absence of special automatic electronic data reduction equipment, the oscilloscope-camera method is the only way of making a data block visible for manual decoding. Oscilloscope photography and manual decoding are slow and tedious processes, and do not lend themselves to large-scale data evaluation. The Ground Data Reduction contractor has been terminated by the Air Force and no ABLE System Automatic Data Reduction has been accomplished since Flight No. 5.

N3A NAVIGATION SYSTEM

N3A Star Search Mode

The new N3A flight program has been completely checked out and is ready for use in flight. The results obtained with this program during ground checks were excellent. In every case in which the star was out of the normal field of view, tracking was quickly obtained by the automatic search routine.

The new flight tape (#22-5X) includes increased precision in the azimuth initialization and reduced Doppler damping factor (0.6 to 0.3) as well as the new automatic star search mode.

N3A Stable Platform Fogging Problems

Soon after the Flight No. 19 landing, an inspection of the Optical Monitor Window showed that a film of moisture had formed on the inside of the window. There was probably a layer of ice on the window during the flight.

The platform is purged with very dry nitrogen prior to each flight, and then the platform is left at some pressure above ambient level. When leakage in flight reduces platform pressures to one atmosphere, a wave-guide pressurization system begins to control platform pressure. The wave-guide system employs a dehumidifier to keep the pressurized air at a dew point of -55°F.

The dehumidifier was removed from the airplane and found to contain excessive moisture. In order to gain access to the dehumidifier it was necessary to remove the Quick Check pod. For this reason a second dehumidifier has been installed in the pressurization line near the Stable Platform so that it can easily be checked before each flight.

VERDAN Computer

The "-31" VERDAN Computer that was on loan to Quick Check was returned to the Air Force during this reporting period.

Flight No. 17

Flight No. 17 was for a duration of 55 minutes. Because of the cloud coverage, take-off was made in the Inertial mode. Shortly after take-off, all systems were turned off because there was insufficient cooling air. The N3A System, DCE and Doppler radar operations were good during the short period of flight when the systems were on.

Flight No. 18

On 6 April Flight No. 18 was flown for a duration of 4 hours and 55 minutes. The maximum speed was Mach 1.4, and the maximum altitude was 40,000 feet. Take-off was made in the Inertial mode because of the cloud coverage. Stars were not acquired in flight. The DI mode was used for most of the flight, and an occasional position correction was made to keep the airplane on the desired flight path.

Post-flight examination revealed that the motor generator output was approximately 10 volts low. This voltage is used to power the VERDAN computer memory disc. Also during post-flight examination the platform temperature control circuit was found to be intermittently malfunctioning. When the valve was opened for inspection, it was noted that the head of the coupling pin to the valve was broken. This would allow the valve to bind and thereby disturb the temperature stabilization.

Operation of associated equipment during the flight was as follows:

Doppler Radar	- Good
Data Conversion Equipment	- The drift angle encoder (output to the Auxiliary Data Recording System) was mechanically disconnected prior to this flight because of a bad bearing in this encoder. All other modules operated normally.
Radar Altimeter	- Good
Autopilot (Steering)	- Good
In-Flight Printer	- Good
Fixtaking Tie-In	- Good

Flight No. 19

Flight No. 19 was made on 12 April for a duration of 5 hours and 17 minutes. The maximum speed was Mach 0.92, and the maximum altitude was 38,000 feet. Take-off was made in the SI mode after only a few minutes of startracking. The system was placed in DSI mode shortly after take-off and the system operation was good for the first two hours of flight, after which startracking was lost. However, navigation was sufficiently accurate to complete the planned mission.

Operation of associated equipment during the flight was as follows:

Doppler Radar	- Good
Data Conversion Equipment	- Good
Autopilot Tie-In	- Good
In-Flight Printer	- Paper jammed after 3-1/2 hours
Radar Altimeter	- Good

The probable cause of the loss of startracking while in flight was the moisture film which was found on the inside of the Optical Monitor Window.

AAR-19 INFRARED SYSTEM

Flight No. 17

Since Flight No. 17 was aborted shortly after take-off, no data were obtained.

Flight No. 18

Returns on Flight No. 18 were weaker than those obtained on previous flights. The only recognizable terrain features obtained were rivers. However, the noise level was reduced and longitudinal baring was at a minimum. The system operated without failure throughout the flight.

Flight No. 19

Quality of returns were as good as any previously obtained. Rivers, highways, railroads, and mountains were recognizable throughout the flight. The data was degraded to some extent by the return of longitudinal baring on the film. This baring was caused by accumulation of condensation on the reflective strips placed over the segmented window supports, thus preventing them from performing their intended function. No system failures were encountered.

Figure 2 is a picture of Lake McConaughy, Nebraska, taken on Flight No. 14. This IR picture is representative of the best results obtained to date, with the AAR-19 at GD/FW. However, there are two discrepancies in this data that are not representative of a typical flight (1) a longitudinal bar through the center of the picture and (2) discontinuities of straight lines. The longitudinal bar is a result of the center structural bar reflector not having been installed prior to this flight. The discontinuities are a result of an improper V/H signal to the AAR-19 scanner. This resulted from approximate manual V & H inputs having to be used instead of the usual N3A output, which was unavailable due to an N3A malfunction.

F-415 CAMERA

Flight No. 17

No pictures were taken because the flight was aborted shortly after take-off.

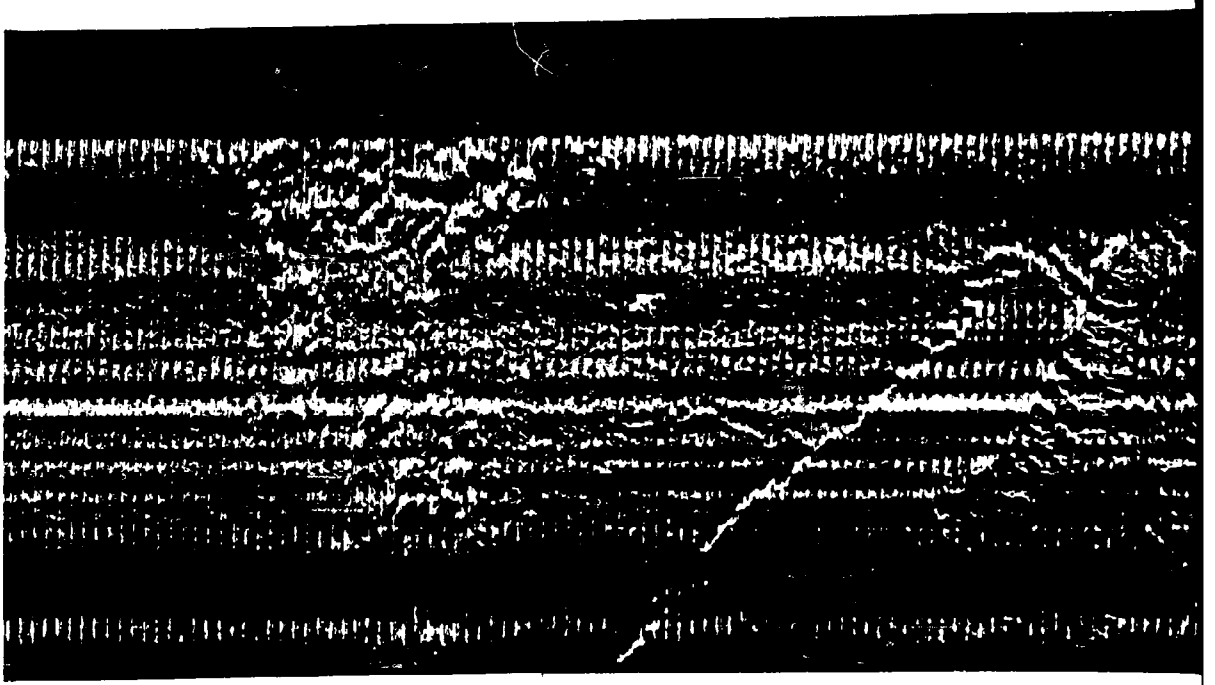


Figure 2. AAR-19
Area;

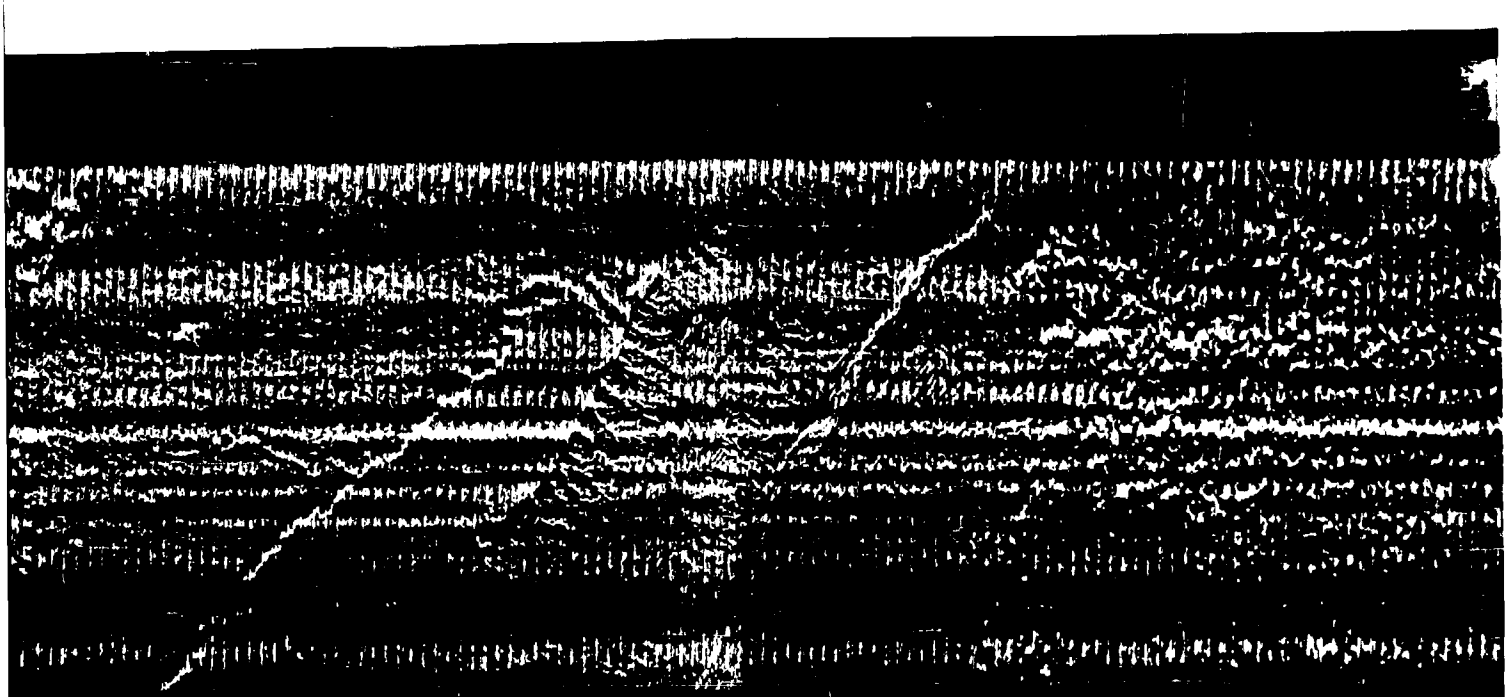


Figure 2. AAR-10 Infrared Receiver – Lake McConaughy, Nebraska Area; Flight No. 14; Altitude 30,270 feet; Heading NW

Flight No. 18

Some low-level pictures were obtained but were under-exposed because of the cloud cover and late hour of take-off. No legible pictures were obtained after flight altitude had been reached. No camera problems were encountered.

Flight No. 19

Pictures were obtained until the film supply was exhausted. The photographs were of very good quality at the beginning of the flight but were somewhat degraded as time elapsed because of an accumulation of oil on the camera window, increasing cloud coverage, and approaching darkness. The camera operation was without incident.

Figures 3 and 4 are photographs taken on Flights No. 12 and 19 respectively. These pictures represent the quality of pictures the F-415 camera is capable of obtaining. It should be noted, however, that Figure 4 was taken under a condition of low light level and a thin coat of oil on the camera window.

AN/APQ-77 RADAR SYSTEM

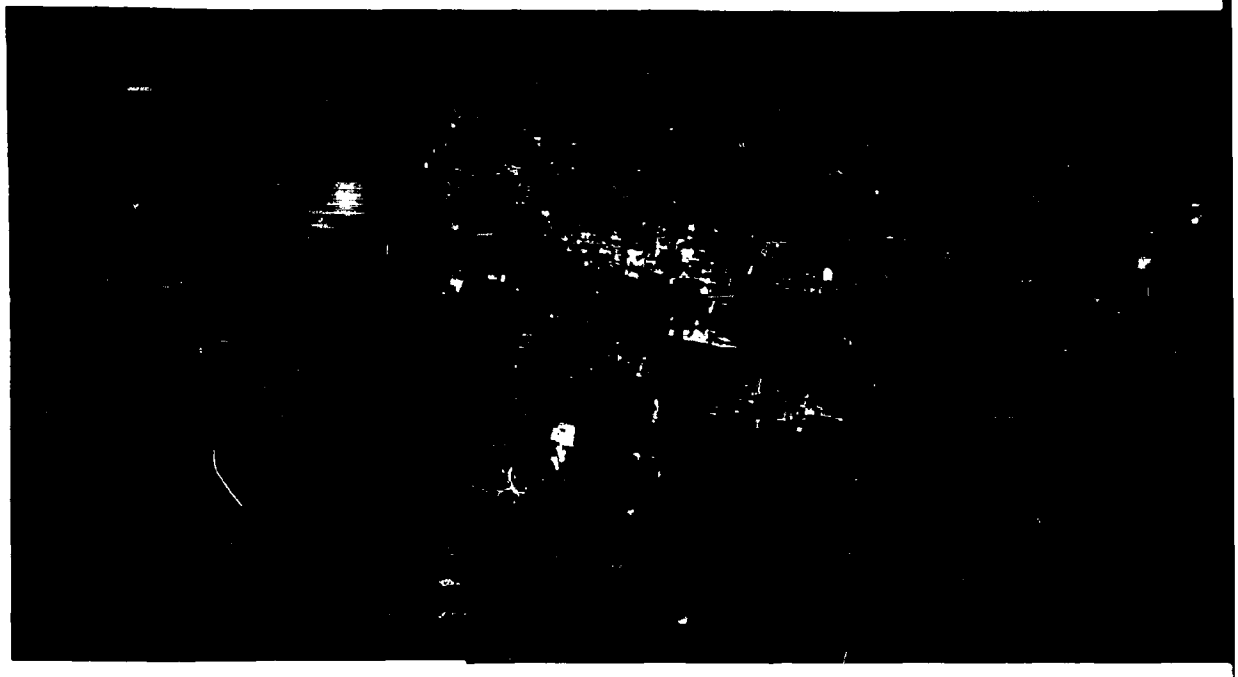
Flight No. 17

Because Flight No. 17 was aborted, there were no data obtained on this flight to evaluate system performance.

Flight No. 18

Video presentations were obtained for approximately two hours on Flight No. 18. The photographs were of good quality and operator presentations were good throughout the flight.

The CRT high voltage disappeared 1 hour and 50 minutes after take-off and remained dormant for 2 hours and 36 minutes. The high voltage reappeared at the precise time that acceleration to Mach 1.4 began. The SIR recorded video presentations during the supersonic time until deacceleration to subsonic began. High voltage did not appear again until descent, which was 5 minutes later and at an altitude of approximately 15,000 feet. Video presentations continued during the remainder of the flight.



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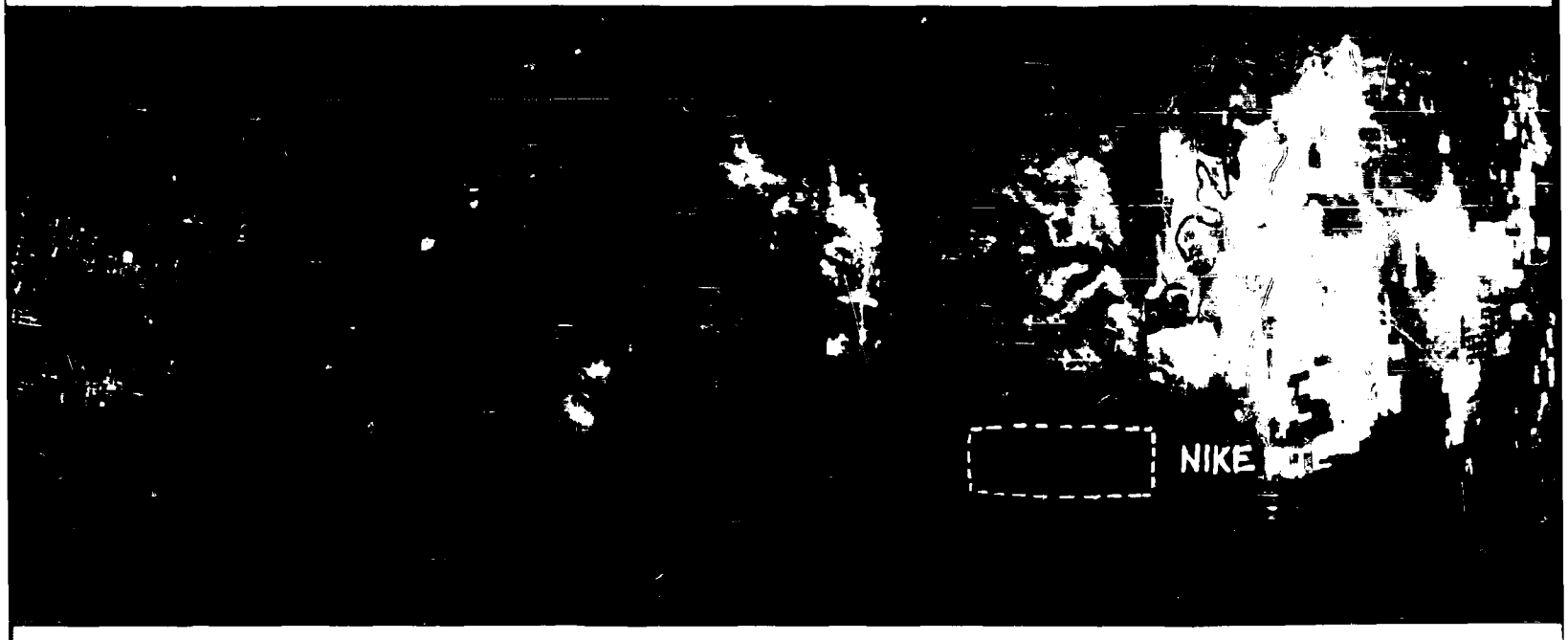

Figure 3. F-415 Camera – Abilene, Texas
Altitude 30,740; Heading 262
443 knots

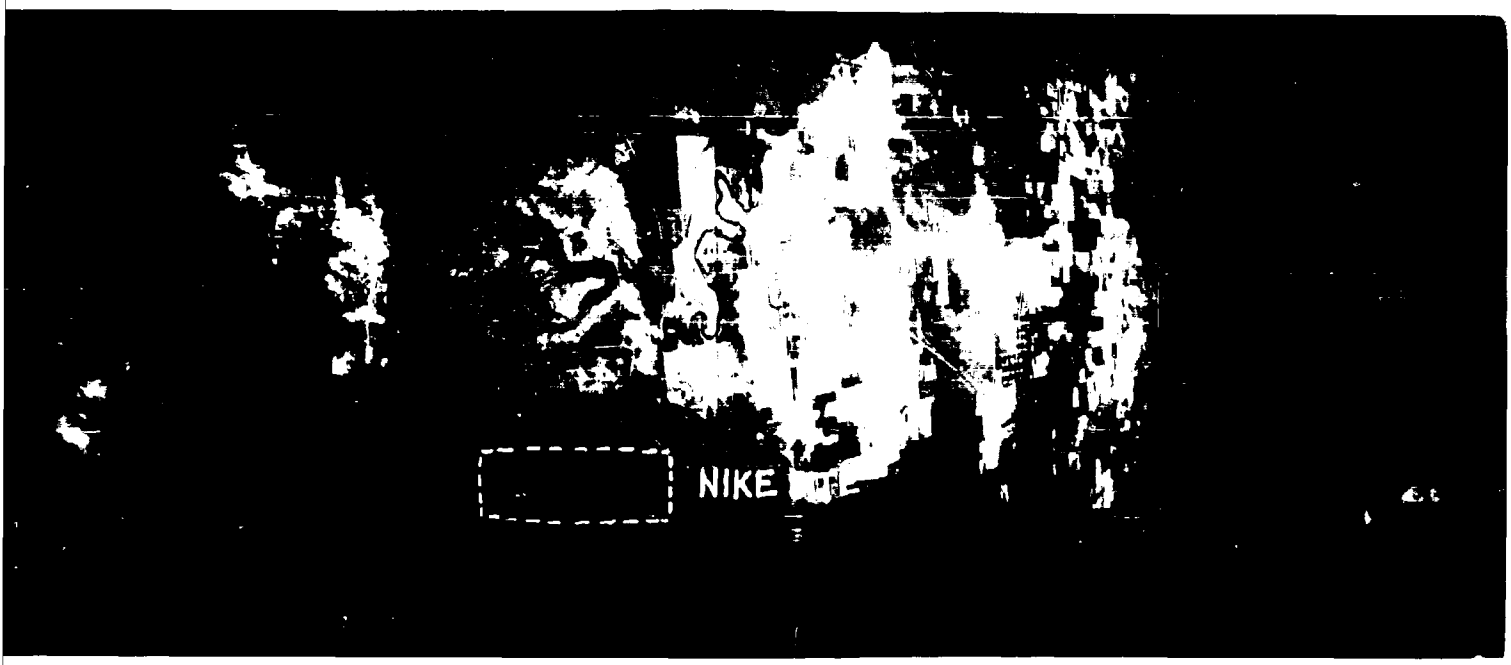

Figure 3. F-415 Camera – Abilene, Texas Area; Flight No. 12; Altitude 30,740; Heading 262.9 degrees; Ground Speed 443 knots

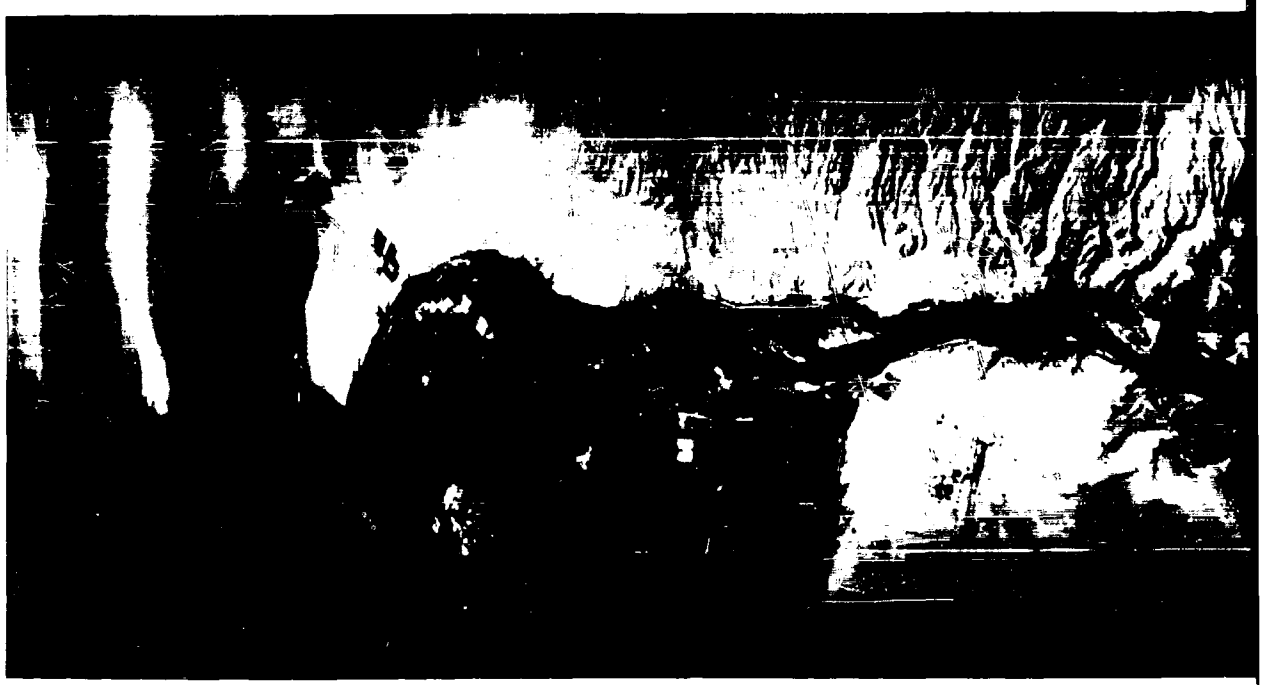

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Figure 4. F-415 Camera - Parker, California an
Flight No. 19; Altitude 36,730; Head
Ground Speed 487 knots

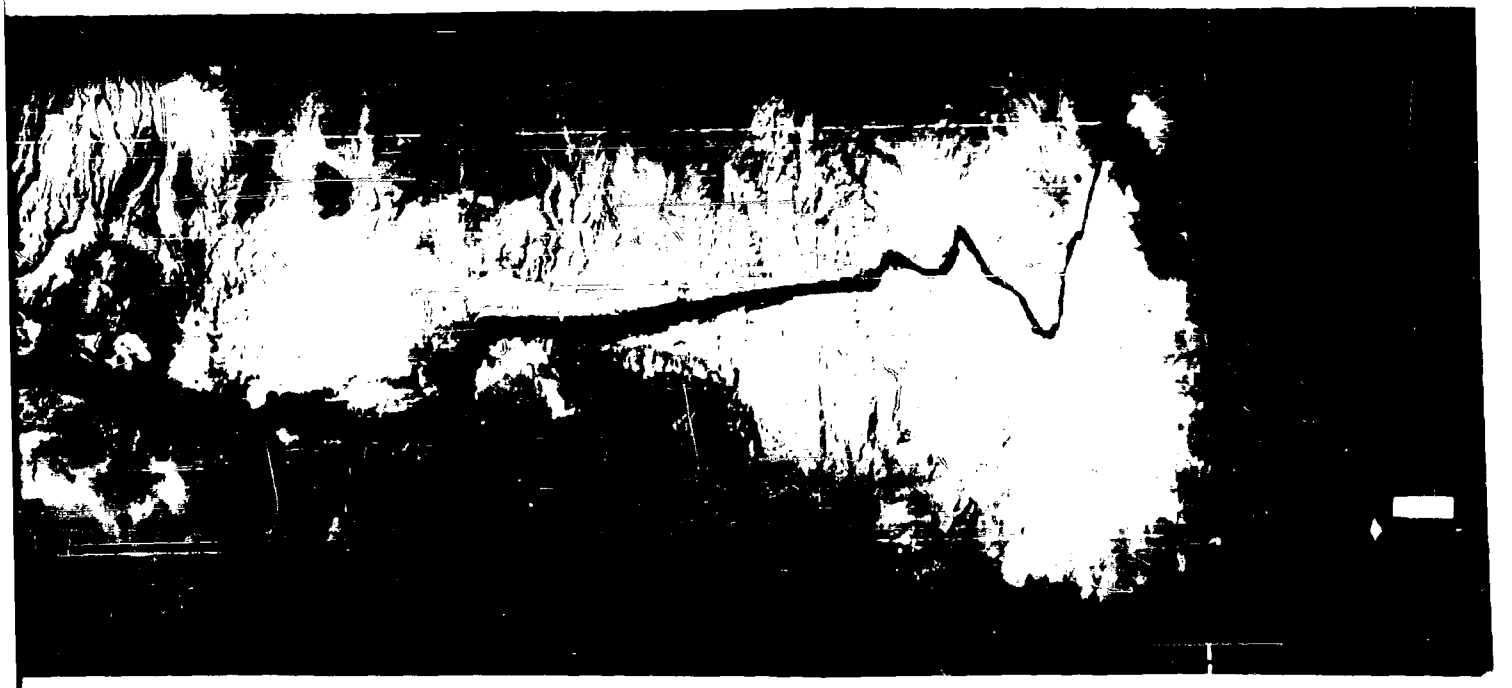

Figure 4. F-415 Camera – Parker, California and Colorado River; Flight No. 19; Altitude 36,730; Heading 324.7; Ground Speed 487 knots

The SIR functioned properly in the laboratory after the flight. After consideration of the various possibilities of the cause for such a phenomena, the high voltage switch was selected as the most likely suspect. The safety switch is mounted directly under the top of the SIR. A test was then performed with one cam lock removed in the vicinity of this switch. By varying the air pressure in the SIR, the high voltage would become intermittent because of the expansion and contraction of the top of the SIR. This switch has been removed.

The video chain was removed from the aircraft and brought to the laboratory to determine the cause of noise increase with strong video returns. This problem was eventually traced to the video compressor. A fix has been installed in this unit which appears to have completely eliminated this problem.

The center spot (sweep origin) has been readjusted in order to obtain the point required for linearity measurements on the PPI photographs.

Flight No. 19

The APQ-77 functioned properly throughout the entire flight. The negative of the flight was slightly darker than was desired, but the duplicate positives which were reproduced were of excellent quality. (See Figures 5, 6, and 7.) Even ground paint is evident throughout the entire video display. The video clipping level will be slightly reduced for the next flight to decrease the film density of video display.

The presentation on the monitor required considerably less gain on this flight. This was expected because of the modification which eliminated the increase in noise with strong video reruns. This flight verified that this problem no longer exists.

APS-73 RADAR SYSTEM

Flight No. 18

Continuous data were obtained in the clutter lock mode of radar operation when the drift angle was less than 6 degrees. Some satisfactory mapping data were obtained in the beam steering mode even though the drift angle was reportedly in excess of 6 degrees. Excessive drift angles were produced by excessive cross winds. No equipment performance discrepancies were noted by the operator throughout the flight.

Figure 5. AN/APQ-77 (XH-1) Radar System Photo - Fort Huachuca Radar Resolution Range; Flight No. 19; Altitude 35,170 feet; Heading 89.2 degrees; Ground Speed 565 knots

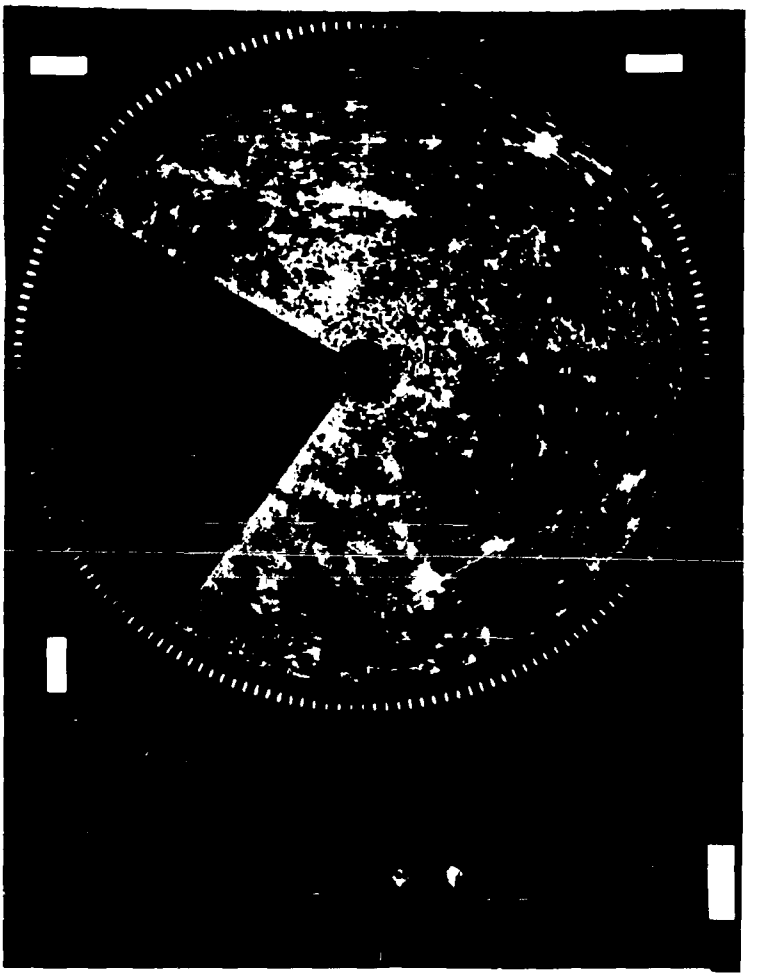

Figure 6. AN/APQ-77 (XH-1) Radar System Photo - Midland-Odessa-Lubbock Area; Flight No. 19; Altitude 33,400 feet; Heading 77.1 degrees; Ground Speed 562 knots

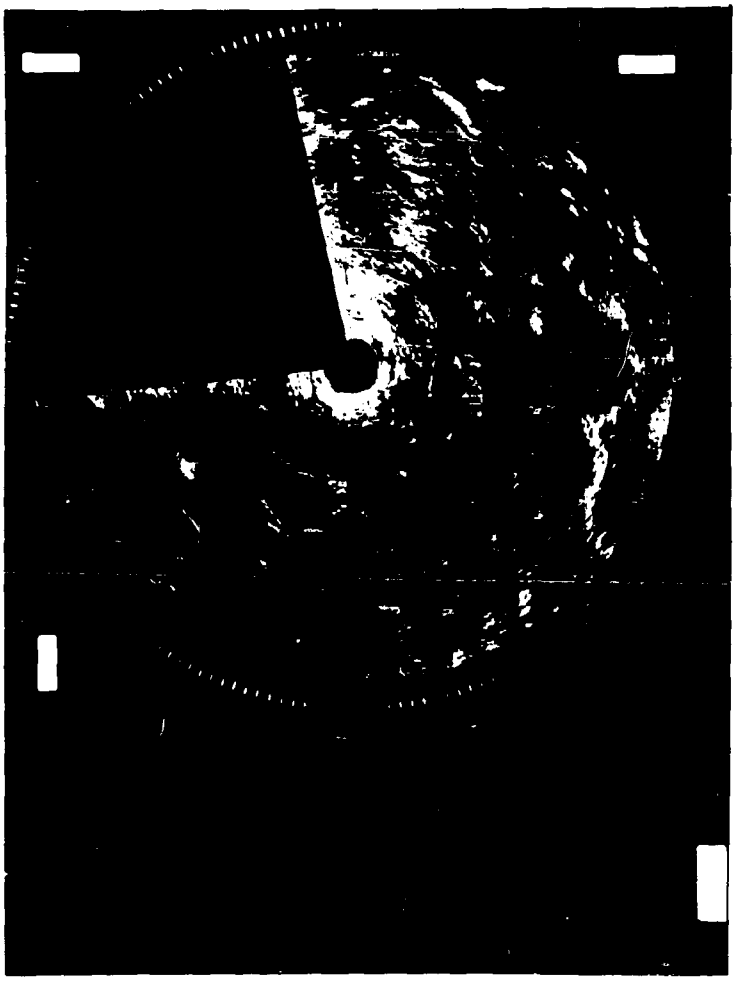

Figure 7. AN/APQ-77 (XH-1) Radar System Photo - Golfo De California; Flight No. 19; Altitude 37,630 feet; Heading 124.8 degrees; Ground Speed 595 knots

A method of manually biasing the azimuthal "looking angle" of the antenna beam was incorporated prior to this flight. The operator was instructed to balance an instrumented clutter lock difference signal, for a portion of this flight, to obtain data which might indicate a "looking angle" error. No improvement in map quality was noted when the above balancing operation was manually performed.

Airfields and distinctly resolved city complexes were obtained on this flight. No degradation in mapping quality was noted during supersonic aircraft flight.

Flight No. 19

Reciprocal heading routes were flown from Fort Worth to Fort Huachuca to the area northwest of Las Vegas, Nevada. Continuous data were obtained in the clutter lock mode of operation when the drift angle was less than 6 degrees. The operator reported a low-output power indication from the left transmitter although no degradation in return signal level was noted.

Some of the degradation of map quality at the film edges has been isolated to a defect in the developing machine rollers. These rollers will be replaced, if time permits, before the next flight.

Radar resolution, as determined by the Fort Huachuca resolution range, was between 50 and 75 feet. The radar reflectors spaced 75 feet apart were resolved in azimuth and range. These resolution determinations were made from channel 2 which had four-on-a-side magnification during this flight. Channel 4 also had four-on-a-side magnification on this flight. Channels 2 and 4 were used for mapping at ranges of 15 to 33 nautical miles and 32 to 50 nautical miles, respectively. Channels 1 and 3 were used to map in the initial two-on-a-side configuration, overlapping on the same side of the aircraft the mapping ranges of channels 2 and 4.

Figure 8 was taken from channel 2 and shows the resolution range. This data was taken at 31,000 feet and at a ground speed of 550 knots.

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GENERAL DYNAMICS/FORT WORTH
A Division of General Dynamics Corporation

22 May 1962
BMH:fy/40367-FW#6-598

Subject: (Unclassified) Contract AF33(600)-40367
Transmittal of Project Quick Check Monthly
Progress Report

To: Following Listed Addressees

Inclosure: (A) General Dynamics Report FPR-4-005,
Issue No. 27, "Project Quick Check Monthly
Progress Report," dated 30 April 1962
(Title - Unclassified; Document - Secret)

1. Inclosure (A) is forwarded for your information and retention.

GENERAL DYNAMICS CORPORATION

B. M. Hill
for L. C. Sonntag
Assistant Project Engineer
GD/Fort Worth

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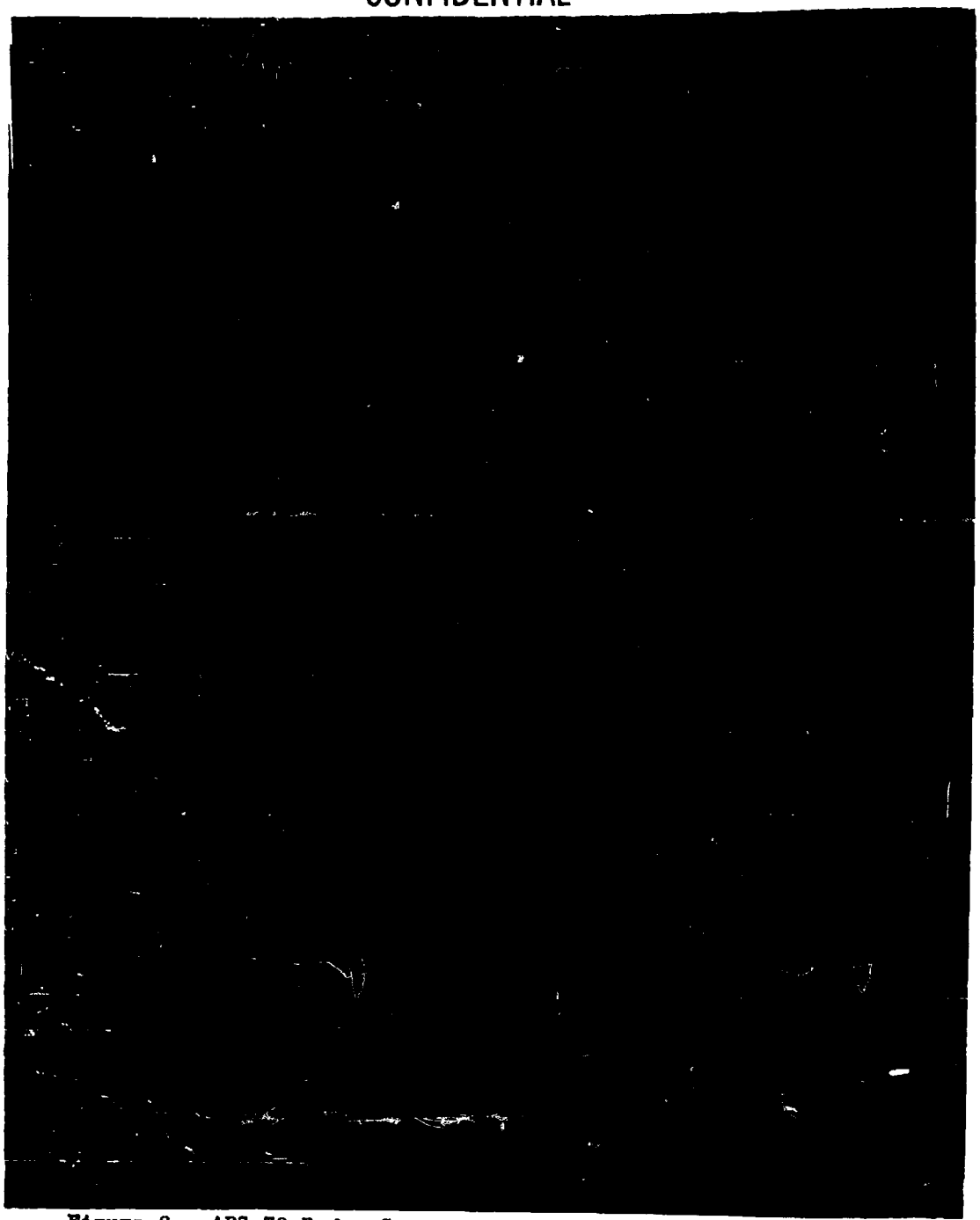


Figure 8. APS-73 Radar System, Channel 2 – Fort Huachuca Resolution Range; Flight No. 19; Altitude 31,000 feet; Heading 270 degrees; Ground Speed 550 knots

Oscillations in the camera film drive were found to be caused by mechanical binding in the exposure drum drive mechanism. These oscillations produced variations in film transmissivities having a 3-inch period along the direction of film travel. Realignment of the gearing mechanism has been made and a 100-foot piece of test film has been run, which indicates that the oscillations due to mechanical binding have been eliminated.

Figure 9 is of the Big Spring area and of Webb AFB. The radar map was made on Flight No. 19 at an altitude of 32,000 feet and a ground speed of 515 knots.

The picture (Figure 10) was taken on a previous flight (Flight No. 12) with the F-415 camera. Figure 11 is the Fort Worth-Dallas area taken from Flight No. 12 at an altitude of 38,000 feet and a speed of 650 knots. Comparison of the F-415 camera and the radar photograph demonstrates the detailed target information obtainable from the side-looking radar. The enlargement of the Fort Worth-Dallas area also contains a tremendous amount of detail. Individual buildings, parks, stadiums, streets, etc., are readily detectable.

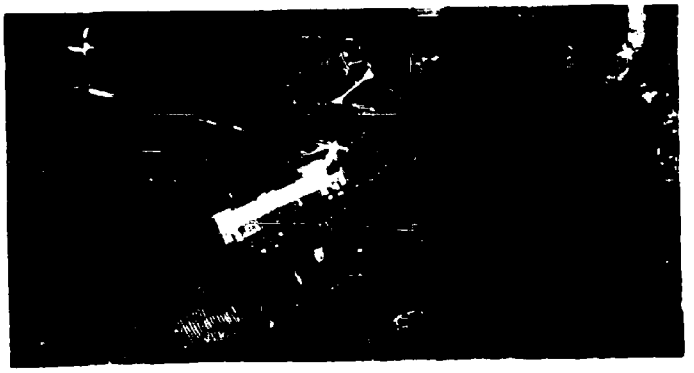
SYSTEM INTEGRATION

All required capabilities of the fixtaking tie-in equipment were successfully employed during Quick Check Flight No. 18. The equipment was used to perform seven fixpoint corrections and three present position corrections in addition to automatic calculation of distance between successive AN/APQ-77 radar photographs. The second station operator reported that performing a large present position correction during this flight apparently resulted in the acquisition of a star by the N3A, as evidenced by his observation of a star pulse indication immediately after this correction.

The fixtaking tie-in equipment operated satisfactorily for 92 percent of Quick Check Flight No. 19. A malfunction of 25-minutes duration was traced to a cold solder connection in one of the magnetic drum cables and a broken wire on the fixpoint bearing module connector.

The range marker on the AN/APQ-77 radar has been accurately adjusted to achieve a precise fixtaking capability.

Figure 9. APS-73 Radar System, Channel 2 - Webb AFB-Big Springs Area; Flight No. 19; Altitude 32,000 feet; Heading 265 degrees; Ground Speed 515 knots



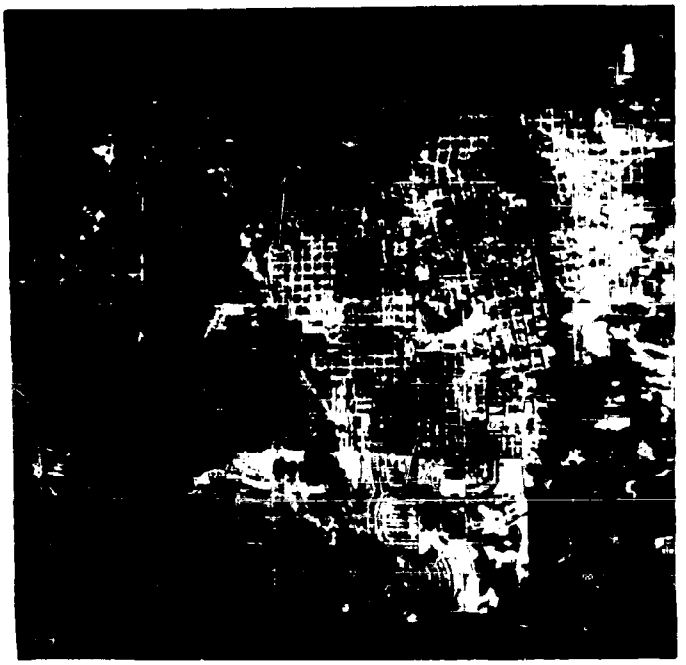


Figure 10. F-415 Camera - Webb AFB-Big Springs Area; Flight No. 12; Altitude 30,350 feet; Heading - Airplane turning; Ground Speed 466 knots

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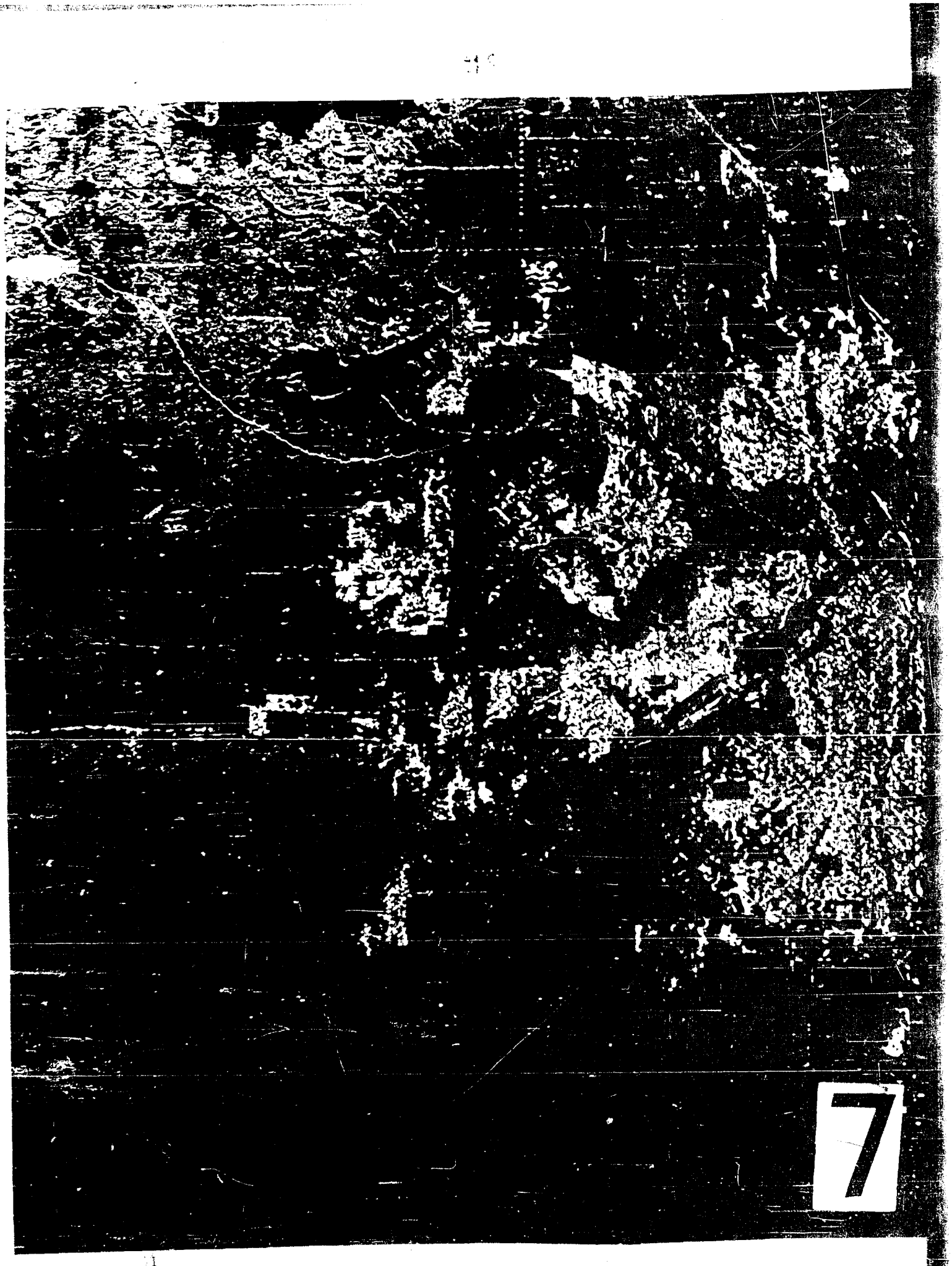
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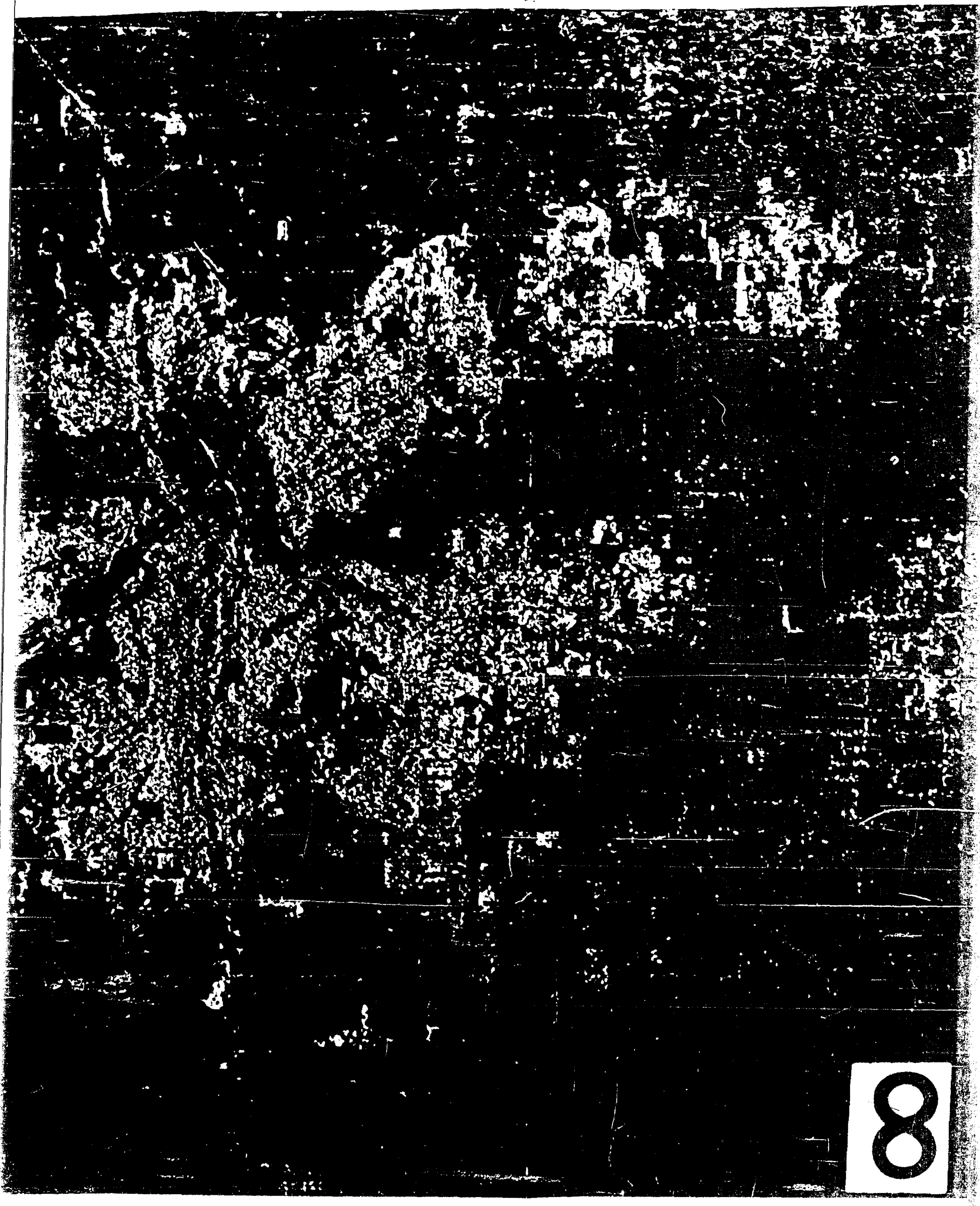
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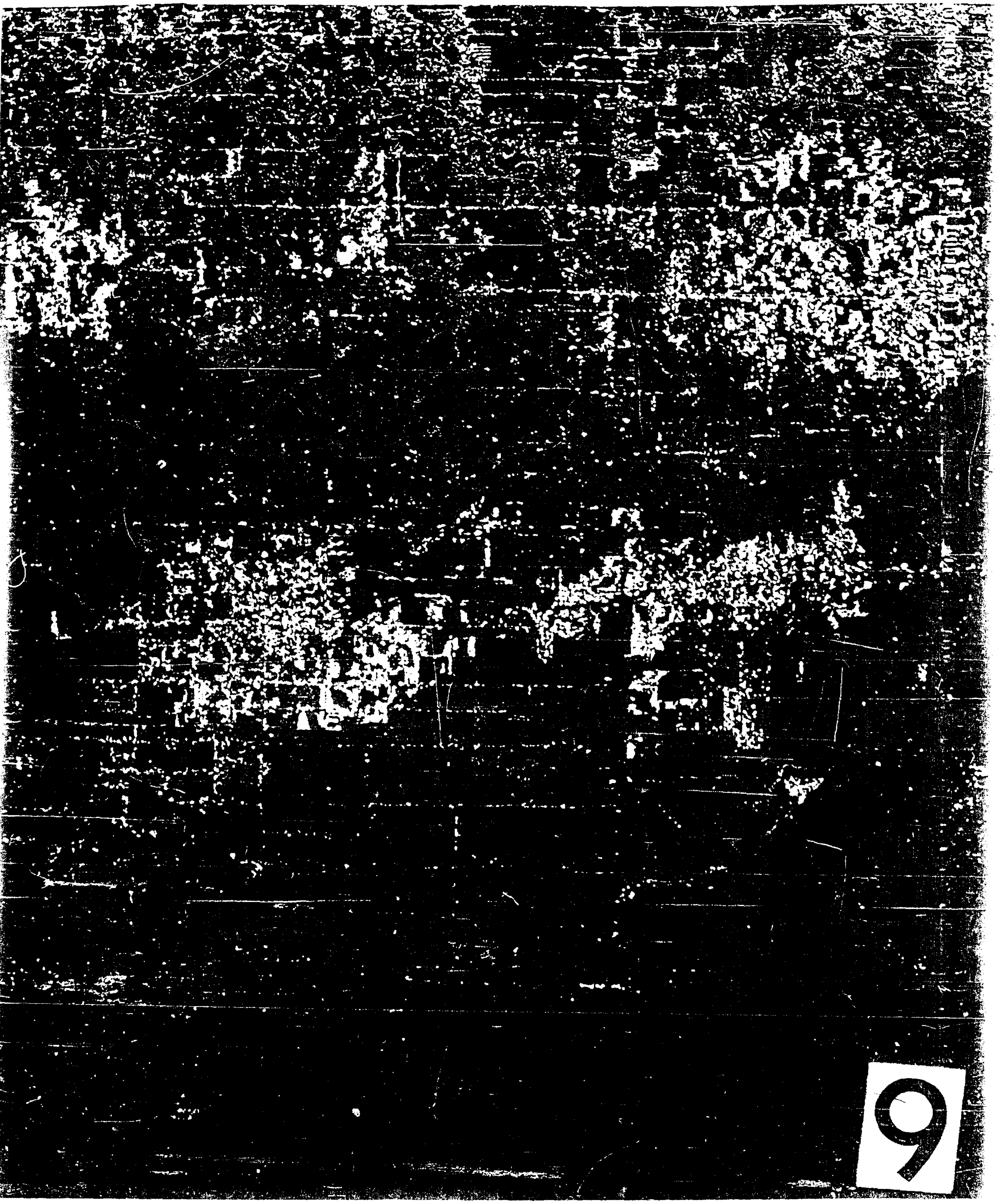
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Figure 11. APS-73 Radar System-Channel - Dallas
Flight No. 12; Altitude 36,000 feet
99 degrees. Ground Speed 650 knots

Figure 11. APS-73 Radar System-Channel - Dallas-Fort Worth Area; Flight No. 12; Altitude 38,000 feet; Heading 99 degrees; Ground Speed 650 knots

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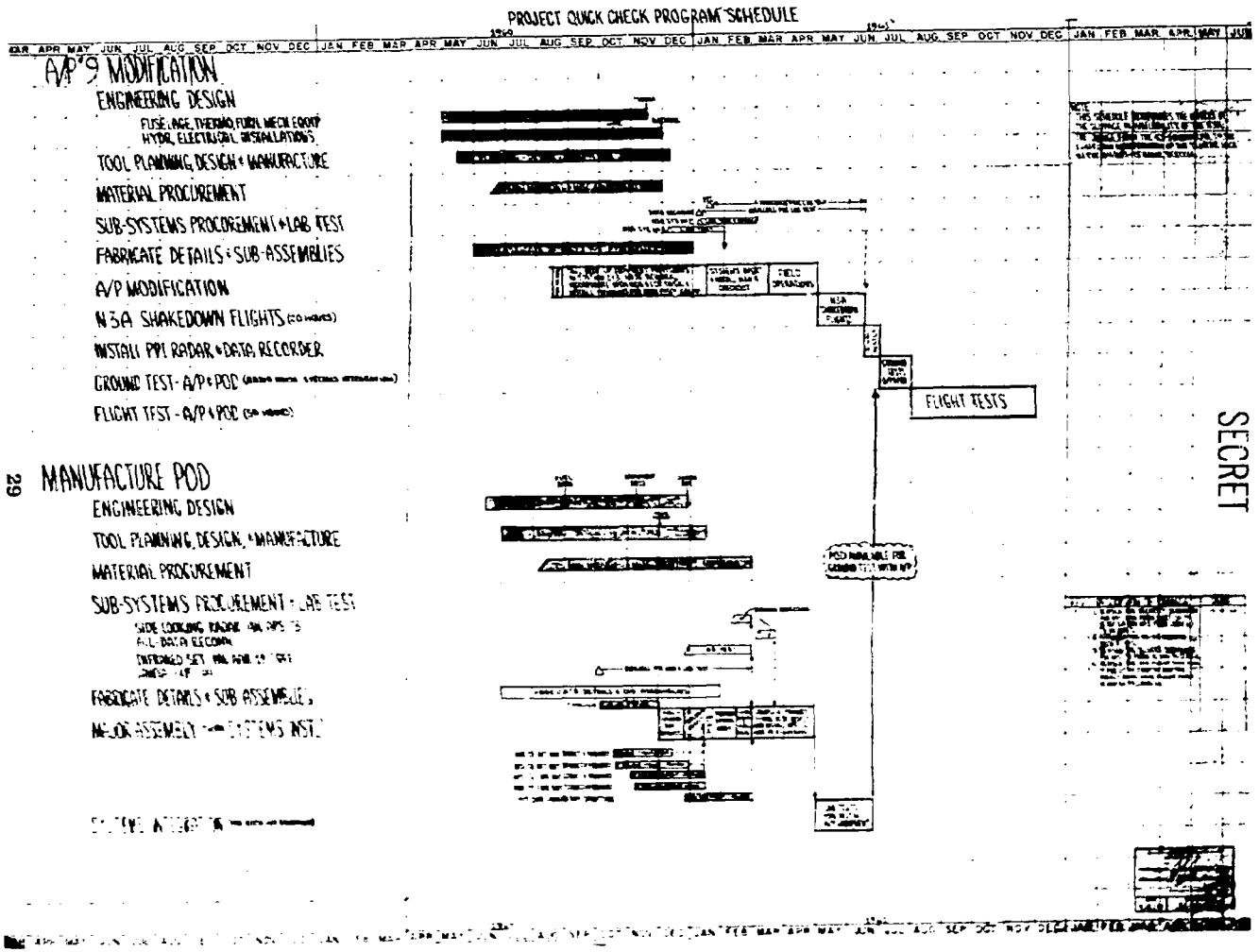
PROJECT QUICK CHECK PROGRAM SCHEDULE
MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN
A/P-9 MODIFICATION
ENGINEERING DESIGN
FUSE, AGE, THERMO, FUEL, MECH EQUIP
HYDR, ELECTRICAL INSTALLATIONS
TOOL PLANNING, DESIGN & MANUFACTURE
MATERIAL PROCUREMENT
SUB-SYSTEMS PROCUREMENT & LAB TEST
FABRICATE DETAILS & SUB-ASSEMBLIES
A/P MODIFICATION
N3A SHAKEDOWN FLIGHTS
INSTALL PPI RADAR & DATA RECORDER
GROUND TEST - A/P & POD
FLIGHT TEST - A/P & POD
FLIGHT TESTS
MANUFACTURE POD
ENGINEERING DESIGN
TOOL PLANNING, DESIGN, & MANUFACTURE
MATERIAL PROCUREMENT
SUB-SYSTEMS PROCUREMENT & LAB TEST
FABRICATE DETAILS & SUB ASSEMBLIES

SECRET

[redacted]
AIR FORCE RESEARCH LABORATORY
WRIGHT-PATTERSON AIR FORCE BASE OHIO 45433

MAY 2 1 2003

MEMORANDUM FOR: 11 CS/SCSL (MDR)

FROM: AFRL/SN
2241 Avionics Circle
Sensors Directorate
Wright-Patterson AFB OH 45433-7320

SUBJECT: Mandatory Declassification Review (MDR) Request, Case 02-MDR-047

1. Case Package 02-MDR-047 has been reviewed by our RF Sensor Technology Division and the recommendation is to change the classification from Confidential to Unclassified.

2. If you have any questions on this matter, please contact Mr. Mark Longbrake, AFRL/SNR, (937) 255-5218, x4264.

Attachment
Case 02-MDR-047

DONALD W. HANSON, SES
Director, Sensors

This memorandum is unclassified when separated from classified enclosures.

[redacted]
CONFIDENTIAL

DEPARTMENT OF THE AIR FORCE
11TH WING

2 March 2005

11 CS/SCS (MDR)
1000 Air Force Pentagon
Washington DC 20330-1000

Mr. Jason H. Gart
15440 N. 71st Street
Apartment 301
Scottsdale, Arizona 85254-8101

Dear Mr. Gart

This is in response to your letter dated 1 November 2004, letter of appeal, requesting public release of the following documents:

Project Quick Check (AD345317)

Project Quick Check (AD345045)

The documents were reviewed by the appropriate Air Force activities and it has been determined the Defense Technical Information Center (DTIC) documents **can** be released to the public:

This completes your request under number 02-MDR-047. If we can be of further assistance, please contact the undersigned at 703-696-7265.

Sincerely

JOANNE MCLEAN
Mandatory Declassification Review
Manager

cc: DTIC